APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,349	12/05/2000	TONY LARSSON	040000-845	6709

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EXAMINER
NG, CHRISTINE Y

ART UNIT	PAPER NUMBER
2663	7

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 December 2000</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-6,9-16 and 20-23</u> is/are rejected.

7)☒ Claim(s) <u>7,8,17-19 and 24-26</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>05 December 2000</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All   b)☐ Some * c)☐ None of:

         1.☒ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3</u>.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   Figures 1-5 and 8 should be designated by a legend such as --Prior Art--

because only that which is old is illustrated. See MPEP § 608.02(g). A proposed

drawing correction or corrected drawings are required in reply to the Office action to

avoid abandonment of the application. The objection to the drawings will not be held in

abeyance.

Specification

2.   The abstract of the disclosure is objected to because it has two paragraphs.

Correction is required. See MPEP § 608.01(b).

3.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

       The text in lines 4-7 of claim 23 are confusing because it is unclear what the

"second one of the nodes" in line 6 has to do with the node that is in common with the

group of first nodes and group of second nodes.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7.   Claims 1-6, 9 and 12-16 are rejected under 35 U.S.C. 102(e) as being

unpatentable over U.S. Patent No. 6,691,173 by Morris et al.

Referring to claims 1 and 9, Morris et al disclose in Figures 1 and 2 a digital

communication system comprising nodes, the nodes including a central node (Figure 1,

M2) and at least two peripheral nodes (Figure 1, S3-S5), the central node (Figure 1, M2)

comprising all means for the communication in the system and a memory (Figure 2,

Element 130) for storing information related to the system itself and/or the individual

nodes (Figure 1, S3-S5), the nodes each comprising a transmitter and a receiver

(transceiver; Figure 2, Element 106), and information only being directly transferred

between the central node (Figure 1, M2) and each of the peripheral nodes (Figure 1,

S3-S5). The system also comprises control means (internet management broadcast) in

the central node (Figure 1, M2) for transferring information stored in the memory means

(Figure 2, Element 130) related to the system and/or the individual nodes to every

peripheral node. Based on advertisements from each of the slaves (Figure 1, S3-S5) in

a piconet, the master (Figure 1, M2) of the piconet stores information relating to slaves

in a network resources table (Figure 2, Element 130). The master (Figure 1, M2) then

issues an internet management broadcast to the slaves (Figure 1, S3-S5) describing the

slaves. Refer to Column 3, line 49 to Column 4, line 8; Column 6, lines 15-60 and

Column 7, line 32 to Column 8, line 19.

Referring to claim 2, Morris et al disclose in Figure 2 that each peripheral node

comprises means (Element 130) for storing the information. "Within slaves nodes, a

network resources table 130 is updated in response to internet management broadcasts

by the master node of the applicable piconet" (Column 6, lines 43-45).

Referring to claims 3 and 14, Morris et al disclose that the direct transferring of

information is made wireless, in particular using short range radio waves. The invention

of Morris et al is implemented using the Bluetooth wireless communications protocol,

which uses short range radio waves. Refer to Column 1, lines 18-25 and Column 3,

lines 14-22.

Referring to claims 4 and 12, Morris et al disclose in Figure 1 that the controls

means (internet management broadcast) in the central node (M2) are arranged to

transfer address information comprising at least one address of each of the peripheral

nodes (Elements S3-S5). Each slave node "transmits an advertisement identifying its

address and the services if offers" (Column 3, lines 56-57). The advertisements of all

slaves are compiled in an internet management broadcast by the master node. Refer to

Column 4, lines 3-8.

Referring to claims 5 and 13, Morris et al disclose in Figure 1 that the control

means (internet management broadcast) in the central node (M2) are arranged to

transfer compatibility related information. Each slave node "transmits an advertisement

identifying its address and the services if offers" (Column 3, lines 56-57). Services

include "the capability of a given slave node to relay message information to and from

one or more outside networks" and "other networks within which the slave node is

capable of communication and the services offered by each" (Column 3, line 63 to

Column 4, line 2). The advertisements of all slaves are compiled in an internet

management broadcast by the master node. Refer to Column 4, lines 3-8.

Referring to claims 6 and 15, Morris et al disclose that the system is a Bluetooth

piconet. The invention of Morris et al is implemented using the Bluetooth wireless

communications protocol, which "contemplates the grouping of physically proximate

wireless nodes into piconets". Refer to Column 3, lines 14-22.

Referring to claim 16, Morris et al discloses that the transferring of the

information is performed using a Bluetooth broadcast mechanism. "Based upon the

advertisements received from each slave node, the master node of the piconet issues

an internet management broadcast" (Column 4, lines 3-5).

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 10, 11 and 20-22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over U.S. Patent No. 6,691,173 to Morris et al in view of U.S. Patent No.

5,768,531 to Lin.

Referring to claim 10, Morris et al does not disclose that part of the information

transferred to every peripheral node is derived from information conveyed from the

peripheral nodes to the central node when requested by the central node.

Lin discloses in Figure 2A a communication system with a central node (AP,

Element 201) that contains a connection list (Element 201a) storing a list of the

addresses of all wireless slave nodes (Elements 203 and 204) that it serves. The

central node (AP, Element 201) periodically broadcast a copy of the connection list

(Element 201a) to each of the wireless stations (Elements 203 and 204) so that the

wireless stations can each contain a copy of the connection list (Elements 203a and

204a). Refer to Column 4, lines 3-18 and lines 54-59. Lin discloses that part of the

information (connection list, Element 201a) transferred to every peripheral node

(Elements 203 and 204) is derived from information conveyed from the peripheral nodes

(Elements 203 and 204) to the central node (AP, Element 201) when requested by the

central node (AP, Element 201). Each AP may "periodically transmit one or more

inquiry messages to the wireless stations and wait for responses". The AP (Element

201) then updates in connection list (Element 201a) depending on whether or not a

wireless station responds to the inquiry message, which indicates whether or not the

wireless station is still within the AP's service area. Refer to Column 5, lines 24-31.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to include that part of the information transferred to every

peripheral node is derived from information conveyed from the peripheral nodes to the

central node when requested by the central node; the motivation being that the central

node needs to send out requests to slave nodes to determine which slave nodes are

still within its service area so that it can update its connection list.

Referring to claim 11, Morris et al does not disclose that part of the information

transferred to every peripheral node is derived from information conveyed from the

peripheral nodes to the central node initiated by the peripheral nodes in particular

triggered by an event in the respective peripheral node.

Lin discloses in Figure 2A that part of the information transferred to every

peripheral node (Elements 203 and 204) is derived from information conveyed from the

peripheral nodes (Elements 203 and 204) to the central node (AP, Element 201)

initiated by the peripheral nodes (Elements 203 and 204) in particular triggered by an

event (keep alive message) in the respective peripheral node. A "keep alive message is

periodically transmitted from each wireless station to each AP in order to keep the AP's

connection list up to date". This way, the central node can know which wireless stations

are still within its service area. Refer to Column 5, lines 20-24. Therefore, it would have

been obvious to one of ordinary skill in the art at the time the invention was made to

include that part of the information transferred to every peripheral node is derived from

information conveyed from the peripheral nodes to the central node initiated by the

peripheral nodes in particular triggered by an event in the respective peripheral node;

the motivation being that there needs to be some sort of mechanism that allows

wireless stations to notify their serving central node whether or not they are still within the central node's serving area, thereby allowing the central node to update its connection list.

Referring to claim 20, Morris et al do not disclose that the transferring of the information is made when a new peripheral node joins the digital communication system.

Lin discloses in Figure 2A that the transferring of the information (connection list, Element 201a) is made when a new peripheral node joins the digital communication system. When a message from "a wireless station newly entering the service area" is received, the AP (Element 201) adds the address of the newly entered wireless station to the connection list (Element 201a) and then sends the updated connection list (Element 201a) all the slave stations (Elements 203 and 204). Refer to Column 6, lines 51-65. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the transferring of the information is made when a new peripheral node joins the digital communication system; the motivation being that that this allows the wireless stations within a service area to receive an updated account of which stations are newly added to the same service area, thereby facilitating peer-to-peer communication which is only possible if slave nodes are within the same service area. Refer to Column 7, lines 54-58.

Referring to claim 21, Morris et al do not disclose that when a new peripheral node joins the system, the part of the information related to all the other peripheral nodes is transferred from the central node to the new peripheral node.

Lin discloses in Figure 2A that when a new peripheral node joins that system, the part of the information (connection list, Element 201a) related to all the other peripheral nodes is transferred from the central node (AP, Element 201) to the new peripheral node. When a message from "a wireless station newly entering the service area" is received, the AP (Element 201) adds to address of the newly entered wireless station to the connection list (Element 201a) and then sends the updated connection list (Element 201a) all the slave stations (Elements 203 and 204) that are under its service area, including the newly entered slave station. Refer to Column 6, lines 51-65. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that when a new peripheral node joins the system, the part of the information related to all the other peripheral nodes is transferred from the central node to the new peripheral node; the motivation being that that this allows the newly entered slave node to receive an updated account of which stations are also within the same service area, thereby facilitating peer-to-peer communication which is only possible if slave nodes are within the same service area. Refer to Column 7, lines 54-58.

Referring to claim 22, Morris et al do not disclose that a message is transferred from the central node to all the peripheral nodes when one of the peripheral nodes has left the system.

Lin discloses in Figure 2A that a message (updated connection list, Element 201a) is transferred from the central node (AP, Element 201) to all the peripheral nodes (Elements 203 and 204) when one of the peripheral nodes has left the system. When "a wireless station moves out of service area, it may leave "gracefully" by sending a

disconnect message to the AP to which it is currently connected". The AP (Element 201) thus removes the address of the disconnected wireless station from its connection list (Element 201a) and "the updated connection list is transmitted to all wireless stations". Refer to Column 6, lines 40-50. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that a message is transferred from the central node to all the peripheral nodes when one of the peripheral nodes has left the system; the motivation being that this allows the wireless stations within a service area to receive an updated account of which stations are still within the same service area, thereby facilitating peer-to-peer communication which is only possible if slave nodes are within the same service area. Refer to Column 7, lines 54-58. This situation is common since wireless stations can easily "roam and move into another AP service area" (Column 6, lines 43-44).

Allowable Subject Matter

10.   Claims 7, 8, 17-19 and 23-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (703) 305-8395. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nguyen Chau can be reached on (703) 308-5340. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng CN
March 20, 2004
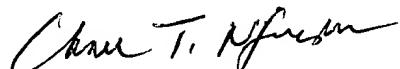
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